

NOTES ON JAPANESE BUTTERFLIES, WITH DESCRIPTIONS OF NEW GENERA AND SPECIES.

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The insects to which the following observations and descriptions refer were collected by Mr. H. Pryer, mostly in the immediate neighbourhood of Yokohama.

Papilio Dehaani, Feld.—This species, which is probably not distinct from *P. Maacki*, Mén., appears to be not very uncommon, but, from its strong and rapid flight, is difficult to obtain in good condition.

P. Demetrius, Cram.

P. Alcinous, Klug.—There are two forms of this species, one black, the other fawn colour (*P. Mencius*, Feld.).

P. Sarpedon, Linn.

In addition, Mr. Pryer takes the following species: *P. Machaon*, L., *Xuthus*, L., "*Xuthulinus*" (? *Xuthulus*, Brem.), and *Pammon*, L. He sends me the following note on *P. Xuthulinus*: "I believe *Xuthulinus* to be a stunted form of *Xuthus*: the larva and food-plant are the same, and very strangely, *Xuthulinus* is the only single-brooded "*Papilio* we have here, appearing very early in the year; the larvæ "feed up very rapidly just as the leaves are going off the trees in November, so the question naturally arises, what becomes of them from "April to November? I think the small size is caused by bad and "insufficient food: if I can get time, I will endeavour to breed them "from the egg next spring."

Parnassius glacialis, Butl.—Two specimens from "Neko, about 100 miles north of Tokio." The species does not seem to occur on the mountains near Yokohama.

Anthocaris Scolymus, Butl.

Colias Hyale, Linn.—I have not seen specimens from Japan. Mr. Pryer states that it is extremely abundant both on the plains and on the mountains.

Terias læta, Boisdu.—I am inclined to think that the insect described by Ménétries as *T. Jægeri* is the Japanese form of *T. læta*. Certainly the specimens in my collection agree closely with his description and figure.

T. Mandarina, De l'Orza.

T. Hecabe, Linn.

T. Brenda, Doubl., Hew.—This species, which appears to be very common in Japan, was originally described from Western Africa. It is very variable in its appearance, the hind marginal border sometimes presenting a well-marked sinus, as in *T. Hecabe*, which in other cases the sinus is almost (or quite) obsolete. I am inclined to think that it is a form of the extremely variable and widely distributed *T. Hecabe*, L.

Gonepteryx rhamni, L.—I have only seen a single (damaged) specimen of this insect from Japan.

Pieris Melete, Mén.—“Varies considerably” (H. Pryer).

Chrysophanus phlaeas, L.—The dark form (*C. Timeus*, Cram., *Eleus*, Fab., *chinensis*, Feld.) is only the summer brood of this species.

Lycæna Argiades, Pall.

L. Argia, Mén.—I think that I have rightly determined the specimens which I have referred to this species, though they all differ slightly from Ménétrics' figure and description. The ♀ especially seems liable to vary. In all the specimens which have come under my observation, I notice the following points of difference from the typical *L. Argia*: on the under-side of the anterior wings there is a minute spot below that within the cell, and another on the costa between the first and second sub-costal nervules; on the posterior wings there is a spot on the inner margin near base; none of these are noticed by Ménétrics. Above these are six (sometimes seven) marginal dots on the hind-wing instead of five. I do not, however, consider these small differences as of specific value. The insect seems common about Yokohama.

L. JAPONICA, *sp. nov.*

Alis suprà dilute cæruleis, postice brunneo-marginatis: subtus cinereis, nigromaculatis (maculis albo-marginatis).

Allied to *L. Argia*, Mén.

♀. Wings above rather dull blue, with a narrow brown border to hind margin, well defined interiorly. *Under-side*: wings ash-grey; fore-wing with a discocellular streak, a spot within cell, another below it faintly indicated, and a transverse row of spots crossing the wing beyond the middle; all these markings are black, and are ringed with white. There are two sub-marginal rows of fuscous, rather elongate spots, the exterior very indistinct, and the inner suffusedly white margined, especially interiorly. A very fine fuscous marginal line before the cilia.

Hind-wings: a basal row of three spots, a discocellular streak, and a curved and angulated row of eight spots beyond middle; all these black, ringed with white. A double hind marginal row of indistinct fuscous lunules. Fringe dirty white.

Alar. exp., 1" 2".

Hab., Yokohama: Japan.

This species, though very close to *L. Argia*, seems distinct. It differs considerably in coloration, and exhibits no trace of the marginal spots of the hind-wing so conspicuous in *L. Argia*. I only possess a single specimen.

L. Ladonides, De l'Orza.—A single ♂ specimen. This species is very closely allied to *L. Argiolus*, Linn., and I cannot but doubt whether it be distinct.

L. Pryeri, Murray.—I believe that the nearest relationship of this very distinct species is with the *Argiolus* group.

L. Lycormas, Butler.—The only Japanese specimens I have seen are the types in Brit. Mus. I possess examples from Amoorland.

SATSUMA, *gen. nov.*

Oculi sat magni, pilosi.

Palpi valde pilosi, porrecti.

Antennæ graciles, sat longæ, distinctissime albo-annulatæ, in clavam distinctam subito desinentes.

Alæ angulatæ, anticæ venâ sub-costali triramosâ, postice ad angulum analem valde productæ.

Head of moderate size; eyes hairy; palpi moderately long, porrect, densely clothed with long hairs, terminal joint slender: antennæ rather long, slender, white ringed, with distinct fusiform club. Thorax robust. Wings triangular, elbowed on hind margin, especially the hind-wing, which possesses a distinct lobe at anal angle.

Male with a small, almost linear, patch on fore-wing, at extremity of cell, similar to that observed in many species of *Thecla*.

Hind-wings with a distinct groove to receive abdomen. Fringes spotted.

I have founded this genus to receive the curious species described by Mr. A. G. Butler (from a very imperfect specimen) as *Lycæna ferrea*, and which is possibly identical with *Thecla cærulescens*, Motsch., though the very vague description by the latter leaves the point uncertain.

The elbowed form of the wings, together with the strongly developed lobe at the anal angle of hind-wings (which may indicate an affinity to *Deudorix*), at once separate the genus from any other known to me. The neuration seems to be nearly as in *Thecla*, but the second sub-costal nervule of the hind-wings is given off further from the base than in that genus.

Dipsas Attilia, Brem.—I have received two specimens, which I think may be referred to the ♀ of this species. They differ from the description of the ♂ in possessing a rather conspicuous sub-marginal row of bluish-white spots (that at root of tail possesses a black centre) on hind-wings above; between these spots and the margin is a well-marked bluish-white line, divided by the brown nervures.

D. sæpestriatu, Hew.

D. lutea, Hew.

DIPSAS JAPONICA, *sp. nov.*

♂. *Alis suprâ viridi-micantibus*: anticis margine externo nigro; posticis caudatis, late nigro-marginatis. Subtus brunneis; anticis strigâ transversâ albâ in ramum medianum primum desinente, fasciâque submarginali fuscâ. Posticis strigâ transversâ albâ, apud angulum analem literæ W instar, acute angulatâ, lunulis marginalibus albicantibus biseriatis, angulum analem versus maculis duabus fulvis (basin versus nigro-marginatis), ocellos nigros gerentibus, lineâque præciliari albâ. Ciliis albis.

♀. *Alis suprâ brunneis*: subtus ut in mare.

Alar. exp., 1" 10".

Hab. Japoniam.

Very nearly allied to *D. smaragdina*, Brem. (E. Siberia), from which, however, it seems to me distinct. Judging from Bremer's figure, the two species would seem to be alike on the upper-side; but *D. japonica* differs beneath in the absence of the discocellular markings, and in the transverse white streak of the hind-wing being *acutely* angulated towards the anal angle (not *obtuse*, as Bremer describes *D. smaragdina*). Between the two black spots at the anal angle of hind-wing is a third small one, bearing some whitish scales in the middle. There are a few metallic-blue scales on the outer edge of the spot at the anal angle. The orange is continued along the inner margin for a short distance.

DIPSAS ORIENTALIS, *sp. nov.*

♂. *Alis suprâ brunneis*, anticis ad apicem marginemque exteriorem saturatioribus, maculâ magnâ pallidâ, obliquâ; posticis caudatis. *Alis subtus canis*: anticis strigâ discocellulari fuscâ, strigâ transversâ albâ basin versus fusco-marginatâ, in ramum medianum primum desinente, maculisque obsoletis præmarginalibus fuscis, albo-marginatis: posticis strigâ discocellulari obsoletâ fuscâ, strigâ transversâ albâ, basin versus fusco-marginatâ, apud angulum analem literæ W instar obtuse angulatâ, lunulis præmarginalibus albis biseriatis, maculâ elongatâ marginis interioris (prope angulum analem) maculâque ad caudæ radicem nigro-pupillatâ, fulvis, lineâque præciliari albâ.

Alar. exp., 1" 7".

Hab. Japoniam.

Very closely allied to *D. Taxila*, Brem. The fore-wings are brown, darker at the apex, and along the hind margin, and possess in the male a yellowish square patch at the end of the cell, which is continued obliquely in the direction of a point on the hind margin a little above the anal angle. This portion is ill-defined. On the under-side, the pattern of the wings much resembles that of *D. Taxila*, but the transverse streak of fore-wing is longer than in that species (judging from Bremer's figure), and the streak on the hind-wing is distinctly angulated in the form of a W, which does not appear to be the case in the allied species.

AMBLYPODIA JAPONICA, *sp. nov.*

Alis suprâ violaceo-cæruleis, late nigro-marginatis, anticis ad apicem subfalcatis, posticis ecaudatis : alis omnibus subtus brunneis, strigis fuscisque saturationibus.

Alar. exp., 1" 6'''.

Hab. Japoniam.

Nearly allied to *A. Rama*, Koll., but abundantly distinct therefrom. The fore-wings are more produced at the apex than in *A. Rama*, and the hind-wings are completely destitute of a tail.

All the wings are above of a rich dark blue, widely black bordered, with only a trace of discocellular streaks. *Under-side*: brown, whitish along inner margin of fore-wing. *Fore-wing*: an oblong mark closing cell, a spot within cell, a spot below each of these, a transverse sub-macular fascia beyond middle, bent on first median nervure, a series of lunules along the hind margin, and a line before the fringe darker brown. *Hind-wings*: markings very indistinct: a basal row of three minute blackish dots, followed by a transverse band of hardly perceptible brown spots; a rather large outlined discocellular mark; a transverse macular band, the spots composing which (except the two nearest the costa) are only outlined with darker; and a sub-marginal row of crescents, edged interiorly near anal angle by greyish-blue scales. Fringe shining brown. All the dark markings of the under-side are faintly and very narrowly edged with lighter brown.

Libythea Lepita, Moore.—Cannot be distinguished from Himalayan examples.

Neptis aceris, Lep.—Cannot be separated from the European species.

Euripus Charonda, Hew.

E. japonica, Feld. (*Diagoras*, Hew.).

Argynnis Sagana, Doubl., Hew.

A. Ella, Brem.

A. Laodice, Pall., var. *japonica*, Mén.

A. pallescens, Butl. ?—I am somewhat doubtful about this species, which I am almost inclined to regard as a variety of *A. Adippe*, W. V. The two specimens now before me (♂) are much larger and more richly coloured than Mr. Butler represents his *A. pallescens*, and indeed, agree more closely in some respects with his *A. vorax* (Shanghai), especially in the shape of the fore-wings, but they possess the three sub-apical silver spots on the under-side of fore-wing, mentioned as one of the points in which *A. pallescens* differs from *A. vorax*. Probably both these forms are local varieties of *A. Adippe*.

Pyrameis indica, Herbst.

P. cardui, Linn.—I have not seen Japanese specimens.

Vanessa Glauconia, Motsch.—Appears to me only a local form of *V. Charonia*, Drury.

V. xanthomelas, W. V.

V. c-aureum, Linn.

Lethe Sicelis, Hew.

Neope Goschkevitschi, Mén.

Satyrus Phædra, Linn., var. *bipunctatus*, Motsch.

Ypthima Argus, Butl. ?.

Mycalesis Gotama, Moore.

M. Perdiceas, Hew.

Pyrgus maculatus, Mén.

DAIMIO, *gen. nov.*

Antennæ costæ medium superantes, gracillimæ, clavâ fusiformi, hamatâ.

Palpi sat breves, squamosi, articulo ultimo distincto.

I have very briefly characterised this genus, which only contains, at present, a single species, *D. Tethys*, Mén. Hitherto this insect has been associated doubtfully with *Pyrgus* (sect. *Erynnis*) or with *Nisoniades*, but it differs considerably from both in structure. The antennæ are long and very slender, and terminate in a gradually formed hooked fusiform club. They are provided with a tuft of hair at the base. The palpi have the second joint covered beneath with squamous scales, whilst the terminal joint is scantily clothed with short hairs. The fore-wings of the male appear to be destitute of the costal fold found both in *Pyrgus* and *Nisoniades*.

D. Tethys, Mén.

Nisoniades montanus, Brem.

Pamphila Dara, Koll. ?—I am doubtful about the identity of the Japanese insect with this Himalayan form; but Indian examples in Brit. Mus. (so named) come very close to those sent by Mr. Pryer.

PAMPHILA VITREA, *sp. nov.* (?).

Alis suprà brunneis, basin versus (præsertim posticis) fusco-pilosis, anticis maculâ sub-apicali pellucidâ tripartitâ, maculâ discocellulari pellucidâ super alteram magnam quadratam, maculâ pallide albo-flavescente subopacâ in venam sub-medianam, maculâque pellucidâ minore inter ramos medianos superiores. Posticis immaculatis.

Subtus alis anticis brunneis, costâ apiceque ochraceis, maculis ut in paginâ superiore, strigâque pellucidâ obliquâ maculas quadratam sub-medianamque attingente. Posticis ochraceis, maculis novem albis brunneo-marginatis, conspiciuis. Ciliis albis.

Alar. exp., 1" 7'''.

Hab. Japoniam.

A distinct and well marked species.

P. guttata, Brem., Grey.

PAMPHILA VARIA, *sp. nov.* (?).

♂. *Alis* suprâ brunneis, anticis margine exteriore rectiusculâ, maculis quatuor minimis (unâ in cellulâ elongatâ). *Posticis* immaculatis. *Alis* subtus ochraceis (anticis ad marginem interiorem brunneis), venis nigris, anticis maculis duabus discocellularibus (inferiore majore), alteris duabus in regione exteriore, maculâ sub-apicali tripartitâ, lineâque anteciliari nigrâ. *Posticis* maculâ obsoletâ basali, maculâ inter ramos sub-costales sub-flavâ, alteris duabus inter ramos medianos, lineâque anteciliari nigrâ. *Ciliis* albis, ad apicem anticarum obsolete nigro-maculatis.

♀. *Alis* anticis (margine exteriore convexâ) maculis conspicuis (duabus discocellularibus) maculâ sub-apicali tripartitâ, alteris duabus in regione exteriore, strigâque minimâ super marginem interiorem. *Posticis* immaculatis. Subtus ut in mare. *Ciliis* albis, ad apicem anticarum nigro-maculatis.

Alar. exp., ♂, 1" 4": ♀, 1" 6".

Hab. Japoniam.

I believe that the insects above described may be sexes of one species, on account of the similarity of the markings of the under-side. It is, however, possible that they are specifically distinct. Only one male has fallen under my observation, but two females now before me differ somewhat on the under-side of the hind-wing, one of them possessing an additional spot between the costal vein and first sub-costal nervule. There is a tendency in both sexes towards the formation on the under-side of both wings of a sub-marginal row of yellow spots.

I have described the hind-wing as spotless above, but in both the females there is an appearance of a very minute central spot. I think, however, that this is accidental, and has been caused in the process of setting.

PAMPHILA PELLUCIDA, *sp. nov.* (?).

Alis suprâ brunneis, albo-maculatis: anticis maculis duabus discocellularibus super alteram exteriorem magnam quadratam, maculâ sub-apicali tripartitâ, alteris duabus inter maculas sub-apicalem et quadratam, strigâque parvâ in venâ sub-medianâ (maculis omnibus pellucidis). *Posticis* maculis quatuor pellucidis, fasciam brevem formantibus.

Subtus, *alis* ochraceo-brunneis, anticis ad marginem interiorem nigro-fuscis, maculis ut in paginâ superiore. *Ciliis* albis.

Alar. exp., 1" 9".

Hab. Japoniam.

Allied to *P. guttata*, Brem., Grey, but sufficiently distinct. The spots on the hind-wing are arranged in a curious alternate manner, the first and third being nearer the hind margin than the second and fourth.

The above notes relate only to insects in my own collection, and do not pretend to form anything like a complete list of the butterflies of Yokohama. I believe that Mr. Pryer is now engaged in the compilation of such a list, to the appearance of which I look forward with much interest.